JOURNAL OF ENVIRONMENTAL LAW & POLICY | 03(01) APRIL 2023
Published by The Grassroots Institute, in partnership with Yaroslav Mudriy National Law University of Ukraine, and in collaboration with Northern Institute of Minority & Environmental Law, University of Lapland. Website: https://grassrootsjournals.org/jelp

ISSN 2564-016X | April 2023

M – 00342 | Analytical Article | Open Access

CLIMATE CHANGE AND CORPORATE REGULATION IN ANGOLA: REFORMING THE REGULATORY FRAMEWORK FOR CLIMATE CHANGE MITIGATION

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Received: 15 February 2023 | **Accepted:** 27 March 2023 | **Published:** 28 April 2023

ABSTRACT

Angola, like many African countries, continuously suffers the deleterious impacts of climate change despite its minimal global carbon contributions. Despite this, it has not taken active steps to institute a climate change regulatory framework or established any strong regulatory regime to aid the regulation of corporate activities and participation in mitigation projects in the country. This article examines the regulatory landscape of climate change and corporations in Angola and assesses the country's ability to tackle the challenges posed by climate change. It examines the country's position in the international climate change arena and scrutinizes the contribution of corporations to Angola's carbon emissions. The absence of legislation on climate change in Angola creates a void which allows corporations in the country to avoid any responsibility for mitigation projects and activities. This article, therefore, analyses the strengths and weaknesses of the alternative regulatory frameworks such as judicial, market, and surrogate regulation that can operate to fill this void and the extent to which they curtail corporate excesses in climate change and incentivise participation in mitigation activities. In scrutinising the deficiencies of Angola's climate change regulatory framework, the article adopts the dilute interventionism model which employs both prescriptive and facilitative measures to regulate corporations and mitigate the impact of climate change. It highlights the structure of the legislative framework, regulator, and technical expertise necessary for the successful implementation of the said model. Additionally, the article argues in favour of adopting a veto firewall protection to maintain the independence of the proposed sole independent regulator to be responsible for regulating the climate change activities of corporations in Angola.

Keywords: Angola; Climate change; Corporations; Dilute Interventionism; Regulatory framework; Veto Firewall protection

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How to cite this paper: Kikelomo O. Kila, 'Climate Change and Corporate Regulation in Angola: Reforming the Regulatory Framework for Climate Change Mitigation' (2023) 03 (01) Journal of Environmental Law & Policy 132-170 <https://doi.org/10.33002/jelp03.01.04>

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Climate Change and Corporate Regulation in Angola: Reforming the Regulatory Framework for Climate Change Mitigation

1. INTRODUCTION

Angola's economy is largely dependent on the oil sector and the service sector. The oil sector contributes approximately one-third of its GDP, amounting to more than 70% of the Government of Angola's revenue, and more than 90% of the total exportation of the country. In addition to the oil sector, the service sector also contributes heavily to Angola's GDP.[1] In the third quarter of 2021 alone, the service sector, particularly the wholesale and retail trade, contributed approximately 17.4% to the country's GDP.[2] Construction and agriculture contribute 9.6% and 8.5%, respectively, to Angola's GDP share.[3]

Angola is an epicentre of climate change-induced impacts.[4] A recent report shows that the economy of Angola has been severely hit by the impact of climate change. The report shows that prolonged drought, damaging flash floods, and reduced crop production, which are a result of drought, have had a major impact on the economy of Angola.[5] A recent World Bank report, released in 2022, showed that Angola suffered severely from the impact of climate change, particularly drought. The report estimates the loss in 2022 to be approximately US$749 million and the most impacted sectors were the agriculture, livestock, and fishery sectors.[6]

Currently, Angola is experiencing its worst drought-related emergency in the last 38 years as a result of climate change.[7] In 2013, the southern region alone experienced a high level of food insecurity, with 1.5 million people in the southern region suffering from food insecurity.[8] The southern provinces in Angola, particularly Cunene, Hulla and Namibe, have also suffered immensely from the impact of drought, severely affecting agriculture and the means of livelihood of people living in those regions.[9] Severe drought was recorded, particularly between November 2020 and January 2021, with average rainfall from 2018 to 2020, making it the worst drought recorded since 1981.[10] In Cunene, Hulla and Namibe, over 1.3 million people were estimated to have experienced high levels of

1 Lars Karnar, 'Africa: Share of Gross Domestic Product (GDP) in Angola as of the Third Quarter of 2021' (Statista, August 2022) <https://www.statista.com/statistics/1139303/share-of-gdp-in-angola-by-economic-activity/> accessed 3 March 2023.

2 *Ibid.*

3 *Ibid.*

4 Joseph C. Miller, 'The Significance of Drought, Disease and Famine in the Agriculturally Marginal Zones of West-Central Africa' (1982) 23 (1) The Journal of African History 17-61. <https://www.jstor.org/stable/181270> accessed 12 April 2023.

5 Mixed Migration Centre, 'Climate and Mobility Case Study January 2023: Cunene Province, Angola: Cahama' (February 2023) <https://reliefweb.int/report/angola/climate-and-mobility-case-study-january-2023-cunene-province-angola-cahama> accessed 15 March 2023.

6 Aleix Serrat-Capdevila, Natalia Limones, Javier Marzo-Artigas, Wijnen Marcus, and Bruno Petrucci, 'Water Security and Drought Resilience in South Angola' (January 2022) The World Bank <https://doi.org/10.1596/37189>.

7 ACAPS, 'Angola: Drought in Southwest' Crisis Updates <https://www.acaps.org/country/angola/crisis/drought-in-south-west> accessed 4 March 2023.

8 Carvalho, S.C.P., Santos, F.D. and Pulquério, M., 'Climate Change Scenarios for Angola: An Analysis of Precipitation and Temperature Projections Using Four RCMs' (2016) 37 International Journal of Climatology 3398. <https://doi.org/10.1002/joc.4925>

9 *Ibid*

10 Ibid

food insecurity between July 2021 and September 2021.[11] The world food security report highlights a higher number of persons in acute food insecurity within the period of October 2021 to March 2022. According to the report, over 1.59 million people were in food insecurity crises or worse in the Southern region, with drought reported as the leading driver of food insecurity within the region.[12] By 2023, these figures increased by over 2.3 million, which shows a staggering increase of approximately 138%. A UNICEF report shows that about 3.8 million were experiencing a high level of food insecurity in 2023 in the provinces of Cucene, Hulla, and Namibe.[13] Children constitute two million persons experiencing a high level of food insecurity.[14] This figure is reflected in Angola's ranking on the Children's Climate Risk, which is exceedingly high, putting children in Angola at increasing risk of climate changed induced disasters.[15]

Amongst the southern provinces, Cunene is the epicentre of drought in Angola. Most people in Cunene rely heavily on rain-fed agriculture. The ubiquity of rain-fed agriculture combined with the unavailability of water caused by the effect of climate change exacerbates the scarcity of water and massively contributes to food scarcity.[16] A report shows that approximately 55% of people living in the province were drastically impacted by drought during 2012, 2013 and 2014. In 2015, approximately 78% of persons suffered from the impact of drought within the region.[17] Angola also suffers from the impact of flooding. This is a serious cause for concern in the regions affected.[18] In January 2007, continuing rainfall led to the flooding of the Luanda and Moxico regions in Angola. In Luanda, the rain caused flash floods in Kilamba, Kiaxi, Cacuaco, and Samba regions destroying several infrastructures.[19] Rainfall in Lauda is very unpredictable, as it has shown over the years. The total yearly rain within this region can be as low as 52 mm (1982) and as high as 860 mm (1984). Most rainfall is short, and when they do come, they come in the form of flooding.[20] The flooding in 2007 within this region led to the displacement of approximately 3,000 families.

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11 *Ibid.*

12 FSIN - Global Network against Food Crises, 'Global Report on Food Crises 2022 (2022) United Nations <https://docs.wfp.org/api/documents/WFP-0000138913/download/?_ga=2.200613486.1530222563.1680892576-815969552.1680892576> accessed 4 March 2023.

13 UNICEF, 'Angola' (2023) <https://www.unicef.org/media/131461/file/2023-HAC-Angola.pdf> accessed 14 March 2023.

14 Ibid.

15 Ibid.

16 Mixed Migration Centre, *supra*-5

17 *Ibid.*

18 Castro, B., Filho, W.L., Caetano, F.J.P., Azeiteiro, U.M., 'Climate Change and Integrated Coastal Management: Risk Perception and Vulnerability in the Luanda Municipality (Angola)' (2018), In: Leal Filho, W. (eds.) Climate Change Impacts and Adaptation Strategies for Coastal Communities. Climate Change Management. Springer, Cham. <https://doi.org/10.1007/978-3-319-70703-7_21>

19 International Federation of Red Cross and Red Cresent Societies, 'Angola: Floods' (May 2008) <https://www.ifrc.org/docs/appeals/07/MDRAO002final.pdf> accessed 14 March 2023.

20 Allan Cain, 'Climate Change and Land Markets in Coastal cities of Angola' (2015) World Bank Conference on Land and Poverty, The World Bank, Washington DC, March 23-27, 2015. <https://angonet.org/dw/sites/default/files/online_lib_files/cain_-_climate_change_and_land_markets_in_coastal_cities_of_angola.pdf> accessed 12 April 2023.

The flooding also reported 117 deaths. In Moxico region, approximately 5,000 families were affected by the flood ultimately requiring urgent relief assistance.[21] In 2021, Launda was also affected by flooding. The flooding in this region led to the destruction of infrastructure in many areas of the city. The flood also led to the death of 14 persons and displaced approximately 8,000 people.[22] Rain-induced flooding also has its effects on health in Angola. Data on the cholera epidemic show that cases of cholera increased by 50%, peaking during February and March in 2007.[23] Also, under-five morbidity and mortality arising majorly from diarrhoeal diseases worsened drastically during the rainy periods.[24]

Angola is also rapidly losing its forestry, wildlife, etc.[25] Angola currently ranks amongst the top deforesting country losing approximately 520,000 ha forests every year from the period of 2000 to 2015.[26] This has contributed greatly to climate change and has negative impacts on agriculture.[27] There is, therefore, an urgent need to ensure the mitigation of climate change through the sustainable management of forests, reducing emissions as a result of deforestation and forest degradation due to the adverse effect it poses on the health, livelihood of people, and the economy of the country.

In addressing this urgent need for mitigating climate change impacts, the effectiveness of the regulatory framework is vital. In Angola's case, there is an almost complete lack of regulatory systems in place to coordinate the climate change response. There is no climate change regulator, no specific climate change regulatory framework, no climate change legislation, no obligations or policies incentivising corporate participation in climate change mitigation and no sufficient mitigation projects to minimise the impacts. The climate change regulatory void in Angola is a significant concern for its citizens who bear the brunt of climate change impacts discussed above.

This article argues that the government of Angola, in fulfilment of its legal obligation to safeguard the climate and environment for Angolans, can, and should, address these shortcomings by instituting a sustainable climate change regulatory framework that imposes prescriptive measures for corporations to incentivise their participation in mitigation projects and at the same time grant them sufficient flexibility to adopt and implement facilitative tools to promote mitigation. The combination of this

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21 *Ibid.*

22 Crisis24, 'Angola: Transport Disruptions Likely to Persist through April 22 Following Flooding in Luanda' (Angola: Transport disruptions likely to persist through April 22 following flooding in Luanda | Crisis24) <https://crisis24.garda.com/alerts/2021/04/angola-transport-disruptions-likely-to-persist-through-april-22-following-flooding-in-luanda> accessed 17 March 2023.

23 WHO, 'World Health Day – 7 April 2009 Floods and Public Health in Angola' (2009) World Health Organization, Regional Office for Africa <https://www.afro.who.int/news/world-health-day-7-april-2009-floods-and-public-health-angola> accessed 17 March 2023.

24 Ibid.

25 Ana Leite and others, 'Reducing Emissions from Deforestation and Forest Degradation in Angola: Insights from the Scarp Forest Conservation Hotspot' (2018) 29 Land Degradation & Development 4291.

26 *Ibid.*

27 *Ibid.*

prescriptive/facilitative measure will optimise corporate participation in climate change and is in fulfilment of the core tenets of the dilute interventionism model for ensuring corporate participation in climate change mitigation. In this regard, three key steps to be undertaken by the government, in accordance with the dilute interventionism model are – promulgating a framework climate change legislation; establishing a sole, independent climate change regulator; and instituting a veto firewall protection for the regulator to guarantee its effectiveness in achieving its regulatory objectives. The mechanisms for instituting these measures and their feasibility are the core focus of this article.

2. ANGOLA'S CARBON EMISSION PROFILE

In 1990, Angola's emission was 43,150 compared to the 79,680 recorded in 2019. The 2019 figure was, therefore, almost double the figures recorded in 1990.[28] In 2021, data shows that there was a 6.05% increase in CO_2 emissions in Angola.[29] The increase amounted to approximately 1.394 million metric tonnes, a sharp increase from 22 million metric tonnes recorded in 2020.[30] The figures for 2021 stood at 24,450,000 tons making Angola the 104th country in CO_2 emissions.[31]

In 2014, Angola's greenhouse gas emissions totalled 0.52 % of the global greenhouse emissions (GHG) emissions. Within that time, the energy sector contributed majorly to Angola's total greenhouse emissions contributing 49.4 % of the total number of emissions.[32] This was closely followed by the land use charge, which amounted to 37.4 % of Angola's total. Agriculture contributed to 11.7 % of its total, while waste and industrial processes contributed 0.9 % and 0.6 %, respectively.[33] Another report shows that, in 2015, CO_2 emissions and land use charges contributed approximately 70 % of CO_2 emissions in Angola,[34] and the energy sector contributions to the total CO_2 emissions in the country amounted to 18 %.[35] This growth in CO_2 was driven majorly by the corporate sector.

3. ANGOLA'S INTERNATIONAL CLIMATE CHANGE PROFILE

The government of Angola has recognised the impact of climate change in the country and, to reduce its effect, has ratified several

[28] Macrotrends, 'Angola Greenhouse Gas (GHG) Emissions 1990-2023' (2023) <https://www.macrotrends.net/countries/AGO/angola/ghg-greenhouse-gas-emissions> accessed 17 March 2023.
[29] CountryEconomy, 'Angola - CO_2 Emission 2021' (2021) <https://countryeconomy.com/energy-and-environment/co2-emissions/angola> accessed 17 March 2023.
[30] Ibid.
[31] Ibid.
[32] ClimateLinks, 'Greenhouse Gas Emissions Factsheet: Angola' (2019) <https://www.climatelinks.org/resources/greenhouse-gas-emissions-factsheet-angola#:~:text=The%20energy%20sector%20serves%20as> accessed 17 March 2023.
[33] Ibid.
[34] IMF, 'Angola Selected Issues' (2022) < https://www.imf.org/-/media/Files/Publications/CR/2022/English/1AGOEA2022002.ashx> accessed 17 March 2023.
[35] Ibid.

international conventions. Key amongst them is the United Nations Framework Convention on Climate Change (UNFCCC), which was signed on the 12th of June 1992, and ratified on the 17th of May 2002.[36] Angola signed the Paris Agreement on the 22nd of April 2016 and ratified the same on the 16th of November 2022.[37] Angola also ratified the Kyoto Protocol on the 8th of May 2007.[38] There are other notable conventions and agreements also which were ratified by Angola. Angola signed the Montreal Protocol on Substances that Deplete the Ozone Layer on the 17th of May 2000. The country is also a signatory to the United Nations Convention on Combating Drought and Desertification (UNCCD) having signed same on the 14th of October 1994 and ratified same on the 30th of June 1997.[39] Other notable conventions include: the Convention on the Conservation of Wild Migratory Species (CMS), the Convention on Biological Diversity (CBD) and the Stockholm Convention on Persistent Organic Pollutants (POPs).[40]

The UNFCCC, for instance, spells out its key principles some of these include: the requirement for state parties to take precautionary measures to anticipate, prevent and minimize the effect of climate change and mitigate its adverse effects, and the right of state parties to promote sustainable development.[41] Angola has since attempted to meet some of the objectives of the Convention. Angola, in compliance with Articles 4.1 and 12.1 of the Convention, which requires a member State to periodically report to the Convention regarding its national circumstance and subsequent response to Climate change, through a National Communication prepared and submitted its first National communication to the UNFCC in 2012.[42] Its second National Communications to the UNFCCC was made in 2021. The 2021 communication aims to provide a set of key actions, especially at the national level, having regard to the various commitments assumed with implementing the UNFCC.[43]

Angola has also made persistent efforts to comply with other agreements.[44] For instance, Angola in compliance with Article 4.2 of the Paris Convention, which specifically requires States to prepare and

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36 United Nations, 'United Nations Treaty Collection' <https://treaties.un.org/Pages/ViewDetailsIII.aspx?src=TREATY&mtdsg_no=XXVII-7&chapter=27&Temp=mtdsg3&clang=_en> accessed 17 March 2023

37 United Nations, 'List of Parties that Signed the Paris Agreement on 22 April' (United Nations Sustainable Development, 3 May 2016) <https://www.un.org/sustainabledevelopment/blog/2016/04/parisagreementsingatures/> accessed 17 March 2023.

38 UNFCCC, 'Nationally Determined Contribution of Angola Republic of Angola' (2021) <https://unfccc.int/sites/default/files/NDC/2022-06/NDC%20Angola.pdf> accessed 17 March 2023.

39 United Nations, *supra-37.*

40 UNFCC, *supra-39.*

41 UNFCCC, 'United Nations Framework Convention on Climate Change' (1992) <https://unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/conveng.pdf> accessed 25 February 2023.

42 United Nations, 'National Communications (NC), Mitigation' (2023)<https://unfccc.int/documents/67469> accessed 17 March 2023.

43 UNFCCC, 'Republic of Angola, Ministry of Culture, Tourism and Environment, National Direction of Environment and Climate Action, Second National Communication' (2021) <https://unfccc.int/sites/default/files/resource/ANGOLA%20SNC.pdf> accessed 17 March 2023.

44 *Ibid.*

communicate Nationally Determined Contributions, drafted its first Nationally Determined Contribution first in 2015[45] and subsequently revised its 2015 edition by drafting an updated Nationally Determined Contribution in 2020.[46]

4. ENVIRONMENTAL REGULATIONS IN ANGOLA

All the environmental regulations of Angola draw their validity from the Constitution of Angola. The Constitution of Angola was first signed in 1992, but was, however, replaced in 2010 and a constitutional amendment introduced specific provisions for the protection of the environment and these provisions act as the basis for the Environmental Framework Law.[47] Article 39 of the Constitution provides for the right of every citizen of Angola to live in a healthy and unpolluted environment along with the duty to defend and to preserve the environment.[48] It further enjoins the states to take requisite measures aimed at protecting the environment and the species of flora and fauna throughout the boundaries of Angola, maintaining the ecological balance.[49] The Constitution further provides that acts posing danger or damaging the environment will be punishable by law.

In addition, Article 90(e) enjoins the state to promote social development by making sure that all citizens enjoy the accruing benefits resulting from collective efforts in terms of development specifically as it relates to an improvement in the standard of living of its citizens.[50] Though Angola's Constitution provides for environmental rights for its citizens, it fails to make any provision on how citizens can implement and enforce the right to a healthy environment. In essence, it leaves the enforcement of the constitutional rights to be determined in statutory enactments and the Environmental Framework Law fulfils this role by providing relevant environmental enforcement protocols.

One of the first pieces of the legal framework on the environment in Angola is the Environmental Framework Law. The 1998 Environment Framework Law No.5/98 provides a legal framework for environmental legislation and regulations in Angola.[51] Article 14 of the Environmental Framework Law gives way to the establishment of environmental protection areas and the setting of those areas. The Article also provides for the identification of activities that would either be prohibited or permitted in protecting the environment.[52] Article 16 of the law makes it compulsory to conduct an environmental impact assessment (EIA) of all undertakings that may have the likelihood of causing an imbalance to the

[45] UNFCC, supra-39
[46] *Ibid.*
[47] WIPO, 'WIPO Lex' <https://www.wipo.int/wipolex/en/text/196467> accessed 17 March 2023.
[48] *Ibid.*
[49] *Ibid.*
[50] *Ibid.*
[51] GOAFRICA, 'Angola' (2021) <https://www.dbsa.org/sites/default/files/media/documents/2021-05/Chapter%203b%20Angola%20English.pdf> accessed 17 March 2023.
[52] *Ibid.*

well-being of the environment and society. Article 17 provides for the issuance of environmental licensing and Article 18 deals with environmental auditing. Article 19 recognises the gravity of the effect of pollution as a by-product of economic development and makes provision for strict measures to curb or limit its effects. Clause 2 of Article 19 allows for the enactment of pollution control legislation to specifically address the production, discharge, deposit, and management of gaseous, liquid, and solid pollutants. The Minister of the Environment is responsible under the law for coordinating the environmental policy and implementing the National Environment Management Programme.[53] The Minister is also charged with the duty of implementing the law in collaboration with other ministries. In conducting EIA, the Minister is responsible for reviewing the environmental impact assessments after comments and recommendations of the National Directorate for the Prevention and Assessment of the Environmental Impact have been forwarded to him (as it relates to whether the environmental license should be granted or not).[54]

The National Environmental Management Programme was finalized by the Ministry of Environment in 2009. The document reiterates the need for incorporating an environmental management strategy for the protection of the environment.[55] The document provides five key sub-programmes. These include the promotion of inter-sectoral coordination, protection of biodiversity, flora and terrestrial and marine fauna, ecosystem rehabilitation and protection, environmental education, information and awareness, and environmental management.[56] The Environmental Fund was established by the Presidential Decree No:9/11 of 7th January 2011, with the main purpose of providing necessary funds for the activities provided for under the National Environmental Management Programme. Some of these activities include scientific studies and educational programmes.[57]

Angola has also developed a National Development Plan (2018-2022). This Plan recognises the peculiarity of environmental issues and their cross-cutting effects and proposes along with an Environmental Sustainability Policy aiming at guiding the environmental sector.[58] The Policy, as provided by the plan, provides for four programmes namely climate change, biodiversity and conservation areas, marine spatial planning, ecosystem health and risk prevention and environmental protection.[59]

In line with clause 2 of Article 19 of Environment Framework Law, Angola also has the Presidential Decree 194/11 of 7th July 2011. The Decree contains Environmental Damage Regulations and provides damage

[53] *Ibid.*
[54] *Ibid.*
[55] *Ibid.*
[56] *Ibid.*
[57] *Ibid.*
[58] *Ibid.*
[59] *Ibid.*

regulations to all sectors including the petroleum and mining industries.[60] The regulations make provisions relating to the polluter pays principle, strict liability offence for environmental damages, and provide powers of the Ministry of the Environment to prevent and reduce the likelihood of environmental injury.[61] The law though not dealing specifically on climate change is relevant to climate change because it introduces damage regulations for environmental damages. These damages may include damages caused through the emission of greenhouse gas emissions, such as global warming, and air pollution as a result of corporate activities causing respiratory diseases.

5. CLIMATE CHANGE REGULATORY FRAMEWORK IN ANGOLA

Currently, there is no Climate Change Act and no specific climate change legislative framework in Angola. However, Angola has drawn up several laws through decrees which set up some climate change instruments and ministerial bodies providing bits and pieces of regulation for climate change mitigation.[62] The main forum in Angola that deals with climate change is the National Committee on Climate Change and Biodiversity.[63] The committee was created under the Ministry of Environment and composed of several representatives from the Ministry of Oil, the Ministry of Transport, the Ministry of Education, Science and Technology, the Ministry of Agriculture, the Ministry of Health, etc.[64] For instance, the Committee is responsible for the harmonization of programmes and policies aimed at implementing the Committee's Strategies, creating a plan for investments, integrating issues related to climate change, biodiversity and desertification, etc. The committee is also responsible for creating centres of excellence to research natural disasters and structured observation and investigation of the climate (Article 2) of Presidential Order 10/12 of 2012.[65] The Order also requires the coordinator of the Committee to present to the Minister of the Environment a detailed report regarding the activities conducted by the Committee. The Committee is required to present this report every three months.[66]

The Presidential Decree No. 45/18 was passed in 2018. This Decree contains 33 articles and is divided into 4 chapters. The Decree approves the

60 *Ibid.*
61 *Ibid.*
62 Though Angola has through laws established few bodies for climate change, these laws fail to establish a solely dedicated agency for climate change. There exist also no dedicated funding (Climate Change Fund) to finance priority climate change actions and priority. None of these laws provide for how citizens can sue for climate change related breaches etc. None of these laws also provides for obligations of both the public, private entities in relation to climate change. It therefore becomes expedient for Angola to enact a climate change Act addressing these issues.
63 Vizzuality, 'Presidential Order 10/12 Which Creates the National Committee on Climate Change and Biodiversity - Angola - Climate Change Laws of the World' (2012) <https://www.climate-laws.org/geographies/angola/policies/presidential-order-10-12-which-creates-the-national-committee-on-climate-change-and-biodiversity> accessed 17 March 2023.
64 *Ibid.*
65 *Ibid.*
66 *Ibid.*

Statute of the Ministry of Environment and goes on to modify its functions and structure to include climate change-related functions. Some of these functions include coordinating and overseeing the implementation of measures, strategies, and plans on climate change.[67] The Ministry is charged with overseeing the implementation of strategies, plans, etc. on climate change developed by the National Committee on Climate Change and Biodiversity. The Ministry is also charged with the responsibility of promoting projects and programmes to stabilize GHGs. Other modifications include creating Climate Change Cabinet. The Cabinet oversees promoting and coordinating adaptation and mitigation projects.[68] The Decree also establishes a National Environment Fund, which is aimed at providing funding for priority environmental activities.[69]

Angola also has a National Strategy for Climate Change 2018-2030. This National Strategy aims at eradicating poverty in the country. The Strategy provides for actions that are targeted at adapting the country to the adverse impact of climate change, adopting a low-carbon development model, thus, striving at transitioning Angola to a low-carbon economy, deploying resources, and advancing the strengthening of national institutional capacity.[70] The document for the purpose of achieving these takes into account five pillars, namely: adaptation, capacity building, financing and research, systematic observation and analysis etc.

Presidential Decree No. 30/16 of 2016 approves the Strategic Plan for the Prevention and Reduction of Disaster Risk, within the framework of the National Development Plan 2013-2017. The plan is made up of 6 sections.[71] It creates the disaster risks management requirement and then sets out the procedures to be followed in the event of a natural emergency within the country such as drought, flood, fire, etc. The plan aims to contribute to Angola's sustainable development by reducing the country's vulnerability to climate change.[72] The Ministerial decision No. 223/17 of 2017 creates the Commission for a National Conference on Climate Change and Sustainable Development and provides for its duties and responsibilities. The commission is aimed at raising awareness of high-level policymakers on the dire need to include climate components in

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67 Michal Nachmany and others, 'Climate Change Legislation in Angola the 2015 Global Climate Legislation Study a Review of Climate Change Legislation in 99 Countries' (2015) Grantham Research Institute on Climat Change and the Environment, London School of Economics and Political Sciencees, London, UK <https://www.lse.ac.uk/GranthamInstitute/wp-content/uploads/2015/05/ANGOLA.pdf> accessed 17 March 2023.

68 Vizzuality, 'Presidential Decree No. 45/18 Approving the Statute of the Ministry of Environment (MINAMB) - Angola - Climate Change Laws of the World' (2018) <https://climate-laws.org/geographies/angola/policies/presidential-decree-no-45-18-approving-the-statute-of-the-ministry-of-environment-minamb> accessed 17 March 2023.

69 Ibid.

70 Ibid.

71 Vizzuality, 'Presidential Decree No. 30/16 Approving the Strategic Plan for the Prevention and Reduction of Disaster Risk - Angola - Climate Change Laws of the World' (2016) <https://climate-laws.org/geographies/angola/policies/presidential-decree-no-30-16-approving-the-strategic-plan-for-the-prevention-and-reduction-of-disaster-risk> accessed 17 March 2023.

72 Ibid.

sectoral planning for sustainable development.[73] Presidential Decree 171/18 of 2018 approves forestry regulations aiming at enabling the sustainable management of Angola's forest. Most importantly, it aims at increasing the knowledge on the risk climate change poses on the country's ecosystem.[74]

The Presidential Decree 184/12 creates the statute of the Centre of Tropical Ecology and Climate Change (CETAC). CETAC is charged with the duty of carrying out research and investigations as it relates to tropical ecology and the management of ecosystems aimed at designing and implementing environmental preservation policies and programmes. CETAC also has a climate change department which is aimed at developing models for studying variations in the climate, monitoring the effect of climate change on the environment, particularly its effect on air quality, water, and soil.[75]

Notwithstanding these disparate instruments and bodies, climate change mitigation in Angola remains largely unregulated, uncoordinated, and lacking a unified regulatory framework for managing Angola's climate change objectives. The absence of a single regulator, with specific legal regulatory powers to manage climate change, results into an inability of the government to control carbon emissions by major emitters – mostly the corporations. This absence of climate change regulation is compounded by the poor and undeveloped corporate regulation framework in Angola which results in corporations in the country not taking any step to participate in mitigation projects or devote any aspect of their business activities towards achieving mitigation goals, as is the norm in developed jurisdictions.

6. CORPORATE REGULATIONS ON CLIMATE CHANGE

A review of Angola's legal system reveals that it does not have any regulations on the climate change activities of corporations which recognise the likely risk climate change poses, and the important role corporation plays in aggravating them through their carbon emission. This is in contrast of environmental regulation of corporations in the country which is significantly more developed than the climate change regulation. However, as will be seen below, these environmental regulations are

[73] Vizzuality, 'Ministerial Decision No. 223/17 Creating the Commission for a National Conference on Climate Change and Sustainable Development - Angola - Climate Change Laws of the World' (2017) <https://climate-laws.org/geographies/angola/policies/ministerial-decision-no-223-17-creating-the-commission-for-a-national-conference-on-climate-change-and-sustainable-development> accessed 17 March 2023.

[74] Vizzuality, 'Presidential Decree 171/18 Approving Forestry Regulations - Angola - Climate Change Laws of the World' (2018) <https://climate-laws.org/geographies/angola/policies/presidential-decree-171-18-approving-forestry-regulations> accessed 17 March 2023.

[75] Vizzuality, 'Presidential Decree 184/12 Which Creates and Approves the Statute of the Centre of Tropical Ecology and Climate Change (CETAC) - Angola - Climate Change Laws of the World' (climate-laws.org) <https://climate-laws.org/geographies/angola/policies/presidential-decree-184-12-which-creates-and-approves-the-statute-of-the-centre-of-tropical-ecology-and-climate-change-cetac> accessed 17 March 2023.

unsuitable for the climate change regulation of corporations because, while they cover pollution control and regulation, they do not address the peculiar issues relating to carbon emissions and mitigation activities.

Some of the laws already discussed in the preceding sections contain several provisions regulating corporate contribution to climate change in Angola. The Environmental Framework Law, for instance, under Article 19, recognises the gravity of the effect of pollution as a by-product of economic development and makes provision for strict measures to curb or limit its effects. Clause 2 of Article 19 allows for the enactment of pollution control legislation to specifically address the production, discharge, deposit, and management of gaseous, liquid, and solid pollutants. The Minister is charged with the duty of reviewing the environmental impact assessments after receiving comments and recommendations from the National Directorate for the Prevention and Assessment of the Environmental Impact (as it relates to whether the environmental license should be granted or not).[76]

In line with clause 2 of Article 19 of Environmental Framework Law and the Presidential Decree 194/11, key principles of environmental pollution management such as the polluter pays principle[77], strict liability[78] for environmental damages, and the precautionary principles are incorporated within the country's environmental framework.[79] The law also confers individuals' and NGOs' legal standing to pursue legal actions to obtain compensation for environmental damage. It also provides for strict penalties, some of which include fines of up to US $100 million, as well as cancellation of environmental licences.[80]

The Decree on General Regulation on Environmental Impact Assessment and Environmental Licensing Procedures (Presidential Decree No. 117/2020), for instance, provides for rules and procedures for EIA for both public and private projects. It also provides for procedures for environmental licensing for activities that are likely to affect the environment.[81] Amongst other things, it makes provision for mandatory project registration through the integrated environment system (Article 6), and categories of projects that require licensing (Article 7). The Decree No. 39/00 on the Regulation of Environmental Protection recognizes the huge

[76] *Ibid*. The Presidential Degree 117/120 specifically categorizes projects to be licensed (Article 7) and which are listed in annexes I, II, II, IV and V of the Decree. Some of these includes activities located in areas of high biodiversity value, Activities with potentially irreversible impacts, Activities whose implementation directly affects coral reefs and primary dunes, mangroves, wetlands, Zones containing animal and/or plant species, habitats and endangered ecosystems; etc. Companies, individuals etc who intend to partake in these activities due to their complexity, location, and/or irreversibility and magnitude of possible impacts, must be subjected to an Environmental Impact Assessment for the purpose of ascertaining the potential impact of their activities on the environment. If the appropriate bodies find that the activities to be conducted will have little to no impact on the environment, they will be granted an Environmental license to undertake their activities.

[77] Article 2 of the Presidential Decree No. 194/11

[78] Article 6 of the Presidential Decree No. 194/11

[79] GO Africa, supra note 52.

[80] Ibid; Article 24 of the Presidential Decree No. 194/11.

[81] Presidential Degree No 117/120 <https://faolex.fao.org/docs/pdf/ang194840.pdf> accessed 16 March 2023.

impact of oil production activities and proceeds to regulate environmental practices in the oil industry.[82]

7. CRITIQUING ANGOLA'S CLIMATE CHANGE FRAMEWORK

As stated in the preceding section, Angola does not have climate change legislation. Nevertheless, it has attempted to pursue its climate change goals through the Angola National Climate Change Strategy (NCCS) which was launched in 2017. The aim is to promote sustainable development in Angola while reducing the country's vulnerability to the impacts of climate change and the strategy aims to achieve this goal by adopting a multi-sectoral and participatory approach that involves various stakeholders such as government agencies, civil society organizations, and the private sector.

This strategy has achieved some successes as it produced the National Strategy for Climate Change Adaptation in Angola (Estratégia Nacional de Adaptação às Alterações Climáticas em Angola) (ENNAC) which places emphasis on building resilience to climate change impacts. The Strategy identifies key sectors that are vulnerable to climate change such as agriculture, water resources, coastal areas, and health. To build resilience in these sectors, the Strategy outlines measures such as promoting sustainable agriculture practices, protecting water resources, and improving coastal zone management.[83]

Another success of ENNAC is its commitment to promoting low-carbon development in Angola. The Strategy recognizes that reducing greenhouse gas emissions is essential for mitigating the impacts of climate change. To achieve this, ENNAC outlines measures such as promoting renewable energy sources, improving energy efficiency, and promoting sustainable transport. An example of a practical measure that has been implemented to promote renewable energy sources in Angola is the development of the Soyo Combined Cycle Power Plant.[84] The plant has a total capacity of 750 megawatts and utilizes natural gas as its primary fuel source.[85] By generating electricity through natural gas instead of coal or other fossil fuels, the Soyo plant helps to reduce greenhouse gas emissions and promote cleaner energy sources in Angola.

Further, the strategy, through the NCCS, has promoted climate-smart agriculture, which aims to increase food production while also reducing greenhouse gas emissions and improving resilience to climate change. An example of Angola's effort to promote climate-smart

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82 *Ibid.*

83 According to the National Strategy for Adaptation to Climate Change (ENNAC), measures to promote sustainable agriculture practices include "improving soil fertility, introducing drought-resistant crops, promoting sustainable land use practices, and improving access to credit and agricultural inputs for smallholder farmers"^[National Strategy for Adaptation to Climate Change (ENNAC), para. 4.2.2].

84 Carmen, 'Soyo II Combined Cycle Power Plant, Angola' (Power Technology, 2 December 2021) <https://www.power-technology.com/marketdata/soyo-ii-combined-cycle-power-plant-angola/> accessed 7 April 2023.

85 Ibid.

agriculture is the Sustainable Land Management and Agricultural Productivity Project (PRODEMA).[86] The project aimed to promote sustainable land management practices, improve soil fertility, and increase agricultural productivity in several provinces of Angola.[87]

Furthermore, the NCCS also includes measures to improve climate resilience and adaptation, such as developing early warning systems for extreme weather events and promoting the use of drought-resistant crops. The government is also working to improve access to clean water and sanitation, which is a critical component of climate adaptation. Finally, the strategy recognizes the importance of enhancing the capacity of stakeholders to address climate change. ENNAC outlines measures such as improving climate change education and awareness, building the capacity of government agencies, and promoting research and innovation.

7.1 Shortcomings of Angola's Climate Change Regulatory System

The absence of a climate change legislation or legislative framework is an overriding shortcoming that looms large in Angola's climate change regulatory framework as it significantly undermines the enforceability of the climate change goals and the ability of the NCCS and ENNAC to achieve meaningful progress in pursuing mitigation goals.

However, there are other shortcomings that hinder the effective implementation of the climate change goals based on the current regulatory system. One of the key shortcomings is the lack of specificity and measurability in its goals and targets. The NCCS sets out broad objectives such as reducing vulnerability and enhancing resilience, but does not provide clear and specific targets that can be measured and tracked. This lack of specificity makes it difficult to hold responsible agencies accountable for achieving the objectives and to monitor progress towards them. Another shortcoming of the Strategy is the limited institutional capacity and resources for its implementation. The Strategy assigns roles and responsibilities to various agencies, but many of these agencies lack the resources, capacity, and expertise needed to effectively implement the Strategy. There is a need for adequate funding and capacity building to ensure that responsible agencies can conduct their assigned tasks.

The Strategy also lacks a clear plan for stakeholder engagement and participation in its implementation. It does not provide for adequate consultation and involvement of stakeholders such as communities, civil society organizations, and the private sector in the development and implementation of climate change mitigation and adaptation projects. This

[86] Land Portal, 'Angola, IFAD to Promote Sustainable Agric' (August 2021) <https://landportal.org/news/2021/08/angolaifad-promote-sustainable-agric> accessed 7 April 2023. See also, World Economic Forum, 'Angola Could Become Africa's Agricultural Powerhouse. Here's Why' (2022) World Economic Forum <https://www.weforum.org/agenda/2022/09/angola-agricultural-sector-powerhouse-of-africa/> accessed 7 April 2023.

[87] FAO, 'Sustainable Land Management in Target Landscapes of Central Angola (ZAEC): Geospatial Information for Sustainable Food Systems' (2023) Food and Agriculture Organization of the United Nations <https://www.fao.org/geospatial/projects/detail/en/c/1397691/> accessed 7 April 2023.

can limit the effectiveness and sustainability of the projects, as they may not fully reflect the needs and priorities of the local communities. In addition, the Strategy does not adequately address the issue of climate change adaptation, particularly for vulnerable communities. While it acknowledges the need for adaptation measures, it does not provide a comprehensive plan for identifying and addressing the specific adaptation needs of vulnerable communities such as those living in coastal areas and drylands. Finally, the Strategy does not provide a clear plan for monitoring and evaluating its implementation. It does not establish clear indicators or benchmarks for measuring progress, nor does it provide a plan for periodic evaluations to assess the effectiveness of the Strategy and its projects.

Finally, the biggest shortcoming (aside from the absence of climate change legislation), is the lack of any climate change regulatory goals for corporations that directly compel and incentivise them to participate in mitigation activities. Corporations are among the biggest carbon emitters and mitigation activities must include corporations to have any meaningful impact on Angola's climate change goals. The omission of corporations in the regulatory objectives set out by the government undermines the effectiveness of its climate change targets and goals.

8.0 ALTERNATIVE REGULATORY FRAMEWORKS IN CLIMATE CHANGE LEGISLATION

The absence of a legislative climate change framework leads to the consideration of potential alternative regulatory frameworks to fill this regulatory void and exert some of the control over corporate activities in the sector while ensuring the implementation of the climate change goals. There are three potential alternative regulatory frameworks for climate change regulation in Angola. These include, but are not limited to, judicial regulation, market regulation and surrogate regulation.[88]

8.1 Judicial Regulation

As the impacts of climate change become more apparent, there is a growing recognition of the need for legal frameworks and judicial regulation to hold responsible parties accountable for their actions and address the issue of climate change.[89] By utilizing the court system to enforce climate change laws and regulations, Angola can hold individuals, corporations, and government entities accountable for their contributions to climate change and for failing to take action to mitigate its effects. This can help raise public awareness about the issue of climate change and the need for action, as court cases can attract media attention and generate public interest.

[88] Kikelomo Kila, Corporate Regulation for Climate Change Mitigation in Africa, (1st Edition, Routledge, 2022) ch 12: 'Implementing Dilute Interventionism in Africa'.

[89] Catherine Higham and others, 'Accountability Mechanisms in Climate Change Framework Laws' (2021) Grantham Research Institute on Climate Change and the Environment, LSE, London, UK <https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2021/11/Accountability-mechanisms-in-climate-change-framework-laws.pdf> accessed 9 March 2023.

Additionally, court decisions can establish legal precedents and set the stage for future actions,[90] which can be an effective way to drive change at the institutional level in Angola. However, there may be challenges associated with using judicial regulation in Angola, including slow and expensive legal processes, and resistance from powerful actors who have a personal stake in maintaining the status quo. Despite these challenges, judicial regulation can be a valuable tool for addressing climate change in Angola by enforcing environmental laws and regulations, driving change at the institutional level, and building public support for policies and initiatives aimed at mitigating the effects of climate change.

The Constitution of Angola recognizes the right to a healthy environment in Article 24, which states that "Every individual has the right to a healthy environment and a duty to defend it".[91] The Angola National Climate Change Strategy[92] also provides a framework for mitigating and adapting to the effects of climate change in Angola. The law establishes national targets for reducing greenhouse gas emissions, promotes the use of renewable energy, and establishes mechanisms for monitoring and reporting on climate change activities. In addition, Presidential Decree No. 45/18, approving the Statute of the Ministry of Environment (MINAMB)[93], provides a framework for environmental protection and sustainable development in Angola. It requires that activities that may have a significant impact on the environment undergo an environmental impact assessment before being approved. Furthermore, Presidential Decree No. 261/11 approving the Regulation on the Quality of Water Law 23/11[94] provides for the protection and management of water resources in Angola. It establishes water quality standards and requires that activities that may negatively impact water resources undergo an environmental impact assessment.

In the *Angolan Government vs. the Cuango Mine Company*,[95] which was heard by the Lunda-Norte Provincial Court in 2017, the government accused the mining company of causing environmental damage and pollution through its diamond mining activities in the Cuango municipality. The court ruled in favour of the government and ordered the mining company to pay a fine and take measures to remediate the environmental damage caused by its activities.

Another notable case is the *Angolan Government vs. the Company China International Fund Limited decision of the Provincial Court of Luanda*.[96] In this case, the government accused the company of violating environmental

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90 Colarado Judicial Branch, 'Lesson: Implications and Impact of Court Decisions' <https://www.courts.state.co.us/userfiles/file/Media/Education/36%20Impact%20Appellate%20Decisions.pdf> accessed 16 March 2023.

91 Constituição da República de Angola, adopted on January 21, 2010, Article 24.

92 Visuality, *supra-88*.

93 Vizzuality, *supra-72*.

94 ECOLEX, 'Presidential Decree No. 261/11 Approving the Regulation on the Quality of Water.' (2011) <https://www.ecolex.org/details/legislation/presidential-decree-no-26111-approving-the-regulation-on-the-quality-of-water-lex-faoc119447/> accessed 16 March 2023.

95 Angolan Government vs. the Cuango Mine Company (Angola: Peace Monitor, IV, 5, 1/31/98).

96 Angolan government vs. the Company China International Fund Limited.

regulations by dumping waste in the sea near the city of Luanda. The court found the company guilty and ordered it to pay a fine and take measures to prevent further environmental damage.

8.2 Market Regulation

Although Angola has not implemented a comprehensive carbon tax or emissions trading scheme, it has taken some actions to protect the environment. For example, to promote the adoption of market techniques for low-carbon development in Angola, Angola developed the National Energy Strategy for 2025, which was approved in 2016, and sets out a target of increasing the share of renewable energy in the country's energy mix to 9% by 2025.[97] Additionally, the government introduced a Feed-in Tariff system to promote the development of renewable energy projects and has established the National Agency for Private Investment to facilitate investment in the energy sector.[98]

8.3 Surrogate Regulation

The government has instituted various policies and programs aimed at promoting actions that are in line with climate change regulations in the country. An example is the National Climate Change Strategy, which was developed in 2013 to promote sustainable development and address climate change issues.[99] The strategy includes several initiatives, such as promoting renewable energy, promoting sustainable agriculture, and reducing deforestation and forest degradation. It also aims to increase awareness and education about climate change issues.[100]

Another example is the Clean Development Mechanism (CDM),[101]which is designed to promote sustainable development and reduce greenhouse gas emissions. Under this program, companies in Angola can earn credits for reducing their carbon footprint through projects such as energy efficiency, renewable energy, and reforestation.[102] These credits can be sold on international carbon markets, providing companies with a financial incentive to reduce their emissions.[103]

Angola has also implemented the National Renewable Energy Program,[104] which aims to increase the share of renewable energy in the country's energy mix. The program includes initiatives such as expanding

97 Vizzuality, *supra-72.*

98 Gesto Energy, 'New Renewables Strategy: Angola Energy 2025' (2023) <https://angolaenergia2025.gestoenergy.com/en/conteudo/new-renewables-strategy> accessed 16 March 2023.

99 Vizzuality, *supra-72.*

100 *Ibid.*

101 UNFCCC, 'Nationally Determined Contribution of Angola Republic of Angola' (2021) <https://unfccc.int/sites/default/files/NDC/2022-06/NDC%20Angola.pdf> accessed 16 March 2023

102 *Ibid.*

103 *Ibid.*

104 Vizzuality, 'Executive Decree No. 303/14 on the National Directorate of the Ministry of Renewable Energy - Angola - Climate Change Laws of the World' (2014) <https://climate-laws.org/geographies/angola/policies/executive-decree-no-303-14-on-the-national-directorate-of-the-ministry-of-renewable-energy> accessed 16 March 2023.

access to renewable energy technologies, promoting the use of clean energy sources in transportation, and improving the regulatory framework for renewable energy investments.[105]

Additionally, Angola has implemented Presidential Decree No. 29/16 of 2016 approving the National Plan for the Preparation, Resilience, Response and Recovery from Natural Disasters 2015-2017,[106] which outlines the country's strategy for adapting or developing resilience to climate change impacts. The plan includes initiatives such as improving water resource management, promoting sustainable land use, enhancing early warning systems for natural disasters, reducing pollution, and promoting the conservation of natural resources.[107]

While these alternative regulatory mechanisms address some of the loopholes in Angola's climate change regulatory framework, they fall far short of providing the required coverage and efficacy required to implement Angola's climate change goals, particularly in relation to compelling and incentivising corporate participation in climate change mitigation activities in the country. Consequently, this article proposes the reformation of Angola's regulatory framework through the adoption of the dilute interventionism model which has the prospect of addressing the key shortcomings of the current climate change regulatory framework – lack of climate change legislation, non-inclusion of prescriptive and facilitative measures for mitigation activities, absence of a sole independent climate change regulator and omission of corporate obligations in climate change mitigation. While all these shortcomings can be addressed by the enactment of climate change legislation, the dilute interventionism model helps to dictate the specific structure of the regulatory framework to optimise the effectiveness of the framework, particularly when dealing with corporations that have developed a culture of regulatory resistance and corporate pushbacks on the regulatory framework would be initially expected.

9. IMPLEMENTING THE DILUTE INTERVENTIONISM MODEL IN ANGOLA

The 'dilute interventionism' model is a regulatory approach that aims to promote compliance with climate change regulations by progressively increasing enforcement measures in response to violations.[108] It generally refers to a regulatory approach that emphasizes using both punishment and persuasion to encourage compliance with regulations.[109] The idea is that punishment alone may be ineffective in

[105] *Ibid.*
[106] Vizzuality, 'Presidential Decree No. 29/16 Approving the National Plan for the Preparation, Resilience, Response and Recovery from Natural Disasters 2015-2017 - Angola - Climate Change Laws of the World' (2016) <https://climate-laws.org/geographies/angola/policies/presidential-decree-no-29-16-approving-the-national-plan-for-the-preparation-resilience-response-and-recovery-from-natural-disasters-2015-2017> accessed 16 March 2023.
[107] *Ibid.*
[108] Kikelomo Kila, *Supra*-98
[109] Ibid

changing behaviour, but when combined with persuasion, it can be more effective.[110]

The key to successful dilute interventionism is establishing a synergy between punishment and persuasion.[111] Punishment can be used as a deterrent to discourage non-compliance, while persuasion can be used to encourage voluntary compliance.[112] By using both approaches, regulators can create a more balanced and effective regulatory environment.[113] Unlike other regulatory theories that prioritize facilitative measures, dilute interventionism starts with the most prescriptive measures first, rewarding compliance rather than punishing non-compliance.[114] The regulatory model uses a pyramid enforcement structure to outline the progression of interventionist measures.[115] However, unlike other regulatory theories that have a broad base and increasingly narrower structures, dilute interventionism has an inverse pyramid structure, with a narrow base and increasingly broader structures, as one moves up.[116] This change reflects the practical structuring of the interventionist elements required to prevent corporate excesses while incentivizing corporate participation in the regulatory framework.[117]

The model is based on the concept of providing corporations with a range of increasingly less severe prescriptive sanctions, such as criminal sanctions, civil liability sanctions, administrative sanctions, and penalties.[118] As corporations progress higher up the pyramid, the options become wider and less prescriptive until they reach the top, where they find the widest variety of facilitative and self-regulatory instruments available.[119]

To effectively implement the dilute interventionism model, a regulatory framework that covers all aspects of climate change, including mitigation and adaptation, is crucial.[120] An autonomous regulator must be empowered to enforce obligations and responsibilities on corporations, government bodies, and individuals concerning climate change mitigation and adaptation.[121] The regulator must have sufficient powers to monitor and enforce compliance with the regulations, including the ability to issue licenses and permits, establish appropriate standards, and impose sanctions where necessary.[122]

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110 *Ibid.*
111 *Ibid.* See also, Ian Ayres and John Braithwaite, 'Responsive Regulation: Transcending the Deregulation Debate' (Oxford University Press, 1992) <http://johnbraithwaite.com/wp-content/uploads/2016/06/Responsive-Regulation-Transce.pdf> accessed 12 April 2023.
112 *Ibid.*
113 *Ibid.*
114 *Ibid.*
115 *Ibid.*
116 *Ibid.*
117 *Ibid.*
118 *Ibid.*
119 *Ibid.*
120 *Ibid.*
121 *Ibid.*
122 *Ibid.*

The dilute interventionism approach can be applied in various sectors, including climate change.[123] However, climate change poses a distinct challenge that demands a reconfiguration of the model to achieve regulatory objectives efficiently while minimizing the intervention burden on corporations.[124] In simpler terms, the dilute interventionism model can be used to regulate climate change, but it needs to be adapted to the peculiarities of climate change to be effective without being overly burdensome on businesses.

Angola's Nationally Determined Contribution (NDC) under the Paris Agreement outlines the country's commitments to mitigate greenhouse gas emissions and adapt to the impacts of climate change.[125] Angola's NDC sets a target to reduce its greenhouse gas emissions by 35% by 2030 compared to business-as-usual scenarios, and up to 50% with international support.[126] The NDC also includes a goal to increase the share of renewable energy in the country's energy mix to 30% by 2025 and 50% by 2050.[127] To achieve these targets, the dilute interventionism model can be applied.[128] However, due to the unique challenge that climate change poses, the model must be adapted to ensure effective regulatory objectives while minimizing the burden of intervention on corporations.[129] One way to do this is to restructure the sanction mechanisms at different stages of the enforcement pyramid and incentivize compliance by offering tax credits or other financial rewards to corporations participating in climate change mitigation efforts.[130]

9.1 Regulatory Objective of Dilute Interventionism in Angola

Before discussing the modalities of implementing dilute interventionism in Angola, it is imperative to consider the main focus of the regulatory paradigm to be instituted by the model. Considering the necessity of reducing carbon emissions and its relationship with achieving mitigation goals, the dilute interventionism model restructures the regulatory system to focus on carbon emissions through various regulatory tools that promote mitigation projects and incentivise the regulatees to alter their behaviours in line with the regulatory goals.

One key element of a regulatory system under the dilute interventionism model is, therefore, setting emissions reduction targets for corporations which can be gradually increased or decreased over time depending on the corporate compliance rate. This can be accompanied by requirements for corporations to disclose their emissions data and adopt best practices for reducing carbon emissions. By doing so, the regulatory framework can encourage corporations to take concrete steps towards

123 *Ibid.*
124 *Ibid.*
125 UNFCCC, *supra -111*
126 *Ibid.*
127 *Ibid.*
128 *Ibid.*
129 Kikelomo Kila, *supra-98.*
130 *Ibid.*

mitigating climate change while providing transparency for monitoring progress.

Angola has relatively low carbon emissions compared to developed countries.[131] According to the World Bank, Angola's carbon dioxide emissions per capita were 0.6 metric tons in 2017, which is significantly lower than the average of 4.8 metric tons per capita for high-income countries.[132] However, it should be noted that Angola is a developing country with a growing economy, and its carbon emissions are expected to increase in the coming years as industrialization and urbanization continue.[133]

To effectively address climate change, Angola needs to balance the need to incentivize corporations to reduce their carbon emissions while also protecting vulnerable communities from the impacts of climate change. To achieve this balance, the government can offer incentives such as tax credits, subsidies, and grants to encourage corporations to adopt environmentally friendly practices.[134] For example, if a company invests in renewable energy sources like solar panels or uses energy-efficient equipment, it can receive financial rewards in the form of tax credits or subsidies. This can serve as a motivator for companies to reduce their carbon footprint while also benefiting financially. Incentives can be an effective way to encourage corporations to act on climate change, as they can offset the costs associated with implementing sustainable practices.[135] Additionally, incentives can help to stimulate the growth of green industries and create new job opportunities in the renewable energy sector.[136]

An additional approach to motivating corporations to reduce their carbon emissions is through the use of market-based mechanisms, including carbon pricing.[137] The government can impose a cost on carbon emissions, which would financially incentivize companies to decrease their emissions.[138] This would also generate income for the government, which could then be utilized to finance other initiatives aimed at mitigating climate change.[139] Carbon pricing can take many forms, including a carbon tax or a cap-and-trade system, and its effectiveness depends on its design

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131 UNDP, 'Angola' (2023) (UNDP Climate Promise) <https://climatepromise.undp.org/what-we-do/where-we-work/angola> accessed 16 March 2023.

132 World Bank, 'Angola | Data' (2023) <https://data.worldbank.org/country/AO> accessed 16 March 2023.

133 Olusanya Elisa Olubusoye and Dasauki Musa, 'Carbon Emissions and Economic Growth in Africa: Are They Related?' (2020) 8 Cogent Economics & Finance 1850400.

134 Kikelomo Kila, *supra-98*.

135 *Ibid*.

136 OECD, 'What Is Green Growth and How Can It Help Deliver Sustainable Development? - OECD' (2018) <https://www.oecd.org/greengrowth/whatisgreengrowthandhowcanithelpdeliversustainabledevelopment.htm> accessed 16 March 2023.

137 UNFCCC, 'About Carbon Pricing' (2022) <https://unfccc.int/about-us/regional-collaboration-centres/the-ciaca/about-carbon-pricing> accessed 9 March 2023.

138 Center for Climate and Energy Solutions, 'Carbon Tax Basics' (Center for Climate and Energy Solutions, 16 February 2018) <https://www.c2es.org/content/carbon-tax-basics/> accessed 16 March 2023.

139 *Ibid*.

and implementation.[140] However, if appropriately executed, carbon pricing can encourage companies to innovate and adopt new technologies that reduce their carbon footprint, while also supporting the transition to a low-carbon economy.[141]

9.2 Restructuring the Regulatory Framework through Dilute Interventionism - Incorporating Framework Legislation in Angola

The first step towards implementing dilute interventionism is the enactment of framework climate change legislation in Angola. To effectively address environmental challenges related to climate change, Angola should develop a comprehensive regulatory framework based on the principle of dilute interventionism.[142] This framework law should incorporate strict prescriptive instruments with specific and rigorous prescriptive measures initially to demonstrate the government's authority over corporations.[143] As corporations comply with these measures, the regulatory burden can be gradually reduced, and a co-regulatory approach can be introduced to encourage corporations to adopt sustainable practices and comply with climate change regulations.[144] This approach would strike a balance between regulatory enforcement and incentivizing corporations to participate in climate change mitigation, ultimately leading to a reduction in carbon emissions and a more sustainable future for Angola.

The Framework law should also adopt a co-regulatory approach for managing corporate participation in mitigation activities. The co-regulatory approach is a collaborative effort between regulatory bodies, corporations, and the state to enhance compliance.[145] This approach acknowledges that corporations can take responsibility for regulating themselves in specific areas of the regulatory framework once regulatory requirements have been satisfied.[146] By promoting cooperation between corporations and regulatory bodies, the co-regulatory approach can improve compliance and effectiveness in mitigating climate change. When drafting climate change regulations in Angola it is important to start with strict, prescriptive measures that demonstrate the government's authority over corporations, such as the possibility of losing their operating license.[147] As compliance improves, less severe measures can be used, such as the closure of facilities or criminal and civil sanctions against corporations and their senior officers.[148] The ultimate goal is to move

[140] UNFCCC, *supra-111*.
[141] Grant Jacobsen and Carolyn Fischer, 'The Green New Deal and the Future of Carbon Pricing' (Resources for the Future) <https://www.rff.org/publications/all-publications/the-green-new-deal-and-the-future-of-carbon-pricing/> accessed 16 March 2023.
[142] Kikelomo Kila, *supra-98*, ch 5: '*Dilute Interventionism and Framework Climate Change Legislation'*.
[143] *Ibid.*
[144] *Ibid.*
[145] *Ibid.*
[146] *Ibid.*
[147] *Ibid.*
[148] *Ibid.*

towards a self-regulatory framework by providing incentives and assistance to encourage compliance with regulatory standards.[149] This approach balances the need for effective regulation with the desire to minimize the regulatory burden on corporations. Thus, as corporations adhere to the intervention measures to a satisfactory extent, they eventually become self-regulating entities.

9.3 Establishing an Independent Climate Change Regulator

To effectively implement the dilute interventionism model, it is imperative to appoint an independent regulator that will be responsible for granting licenses to corporations and ensuring their compliance with regulations through monitoring and enforcement.[150] This approach is necessary to enforce the regulatory model, where corporations must obtain a permit from the regulator before engaging in any activity that may pose a threat to the environment or human health.[151] The regulator's role is to oversee and regulate corporations' operations to ensure they meet the required environmental standards and comply with regulations. This would promote accountability and encourage corporations to adopt sustainable practices and minimize their impact on the environment.

Angola currently lacks a climate change regulator conferred with legislative powers to oversee the climate change sector. Although there are different government offices currently overseeing NCC and ENNAC, these bodies are subject to ministerial (executive) control and lack independence to pursue the appropriate regulatory goals. Moreover, the absence of clear legislative powers significantly limits their enforcement powers over corporations and other major climate change stakeholders. Moreover, it is crucial that a single regulator is established for this purpose to avoid duplication of functions and regulatory uncertainty that can minimise regulatory effectiveness.

Additionally, the manner of establishment of the regulator is important and the relevant statutory provision must explicitly confirm the independence of the regulator, the exclusivity of its role as a regulator (i.e., a sole regulator) and the specific powers and functions conferred on the body. To ensure these criteria are satisfied, an exemplar of the proposed statutory provision is provided below:

Section 2 - Establishment of National Climate Change Agency (NCCA)

1. There is hereby established the National Climate Change Agency ('The Agency') which shall be independent and solely responsible for regulating all matters relating to climate change mitigation and adaptation in Angola.
2. The Agency shall not be subject to any direction or control of any other body, person or agency in the execution of its powers and functions vested in this Act.
3. The Agency shall have the power to –

[149] *Ibid.*
[150] *Ibid*, ch:6: '*Veto Firewall' System and Technical Competence of the Climate Change Regulator'.*
[151] *Ibid.*

a. grant licenses to corporations engaged in carbon emission activities.
b. monitor and enforce compliance with the regulations on climate change mitigation and may include licensing fees to cover regulatory costs and other expenses related to the implementation of this Act.
c. set emission standards for meeting Angola's climate change targets.
d. institute mitigation measures and obligations on corporations and other private entities and enforce compliance with these measures/obligations.

9.4 Technical Competence

To ensure that corporations comply with the Climate Change Act, it is necessary to have an independent sole regulator with the technical expertise to understand the complexities of the corporations they are regulating.[152] This includes the ability to evaluate corporations' compliance, establish appropriate standards, and issue licenses with necessary conditions and restrictions. To acquire this technical expertise, the regulator may recruit external consultants with the necessary technical knowledge and experience to provide advice and support in assessing and monitoring corporations' compliance with the regulations.[153] Alternatively, partnerships may be established with technical institutions such as universities, research institutions, and professional bodies that have technical expertise in various fields related to climate change mitigation.[154]

The regulator must be well-equipped to address complex issues such as carbon pricing, emission trading, and other regulatory mechanisms that may require specialized knowledge. It is crucial to have access to the latest scientific and technological advancements to ensure that regulations remain current and effective. By collaborating with external experts and institutions, the regulator can expand its capacity to understand and address the complexities of climate change mitigation while ensuring that the corporations it regulates comply with the Climate Change Act. This collaboration will help foster innovation and ensure that regulatory frameworks are tailored to specific industries, allowing for the effective implementation of mitigation strategies.

9.5 Implementing Veto Firewall Protection for the Climate Change Regulator in Angola

A firewall is a piece of software or hardware that is used to protect against unauthorized network access.[155] To ensure the independence and

[152] *Ibid.*
[153] *Ibid.*
[154] *Ibid.*
[155] Chinmayee Deshpande, 'What Is Firewall: Types, How Does It Work & Advantages' (2022) Simplilearn <https://www.simplilearn.com/tutorials/cyber-security-tutorial/what-is-firewall#:~:text=Firewalls%20are%20network%20security%20systems> accessed 1 March 2023.

impartiality of the proposed independent climate change regulator in Angola, it is essential to establish a protective mechanism known as "veto firewall protection".[156] This mechanism creates a safeguard around the regulator using the State's veto powers to prevent any undue influence or pressure from members of the Executive.[157] Although the senior officials of the regulator will be appointed by the President, to ensure the regulator's autonomy, a single or dual-tier veto firewall system should be established. This system will prevent any executive member from interfering with the regulatory functions of the independent regulator.[158] By doing so, the regulator can carry out its mandate to mitigate and adapt to climate change without any external pressures or influences, thus ensuring the regulator's impartiality and independence.[159]

A single-tier veto firewall requires the approval of only one veto body (parliament) for the appointment and removal of the senior officials of the regulator. On the other hand, the double-tier veto firewall requires an additional veto player in the appointment or removal of the senior officials of the regulator. Usually, this additional veto player is an independent body that makes recommendations to the President in terms of the appointment and removal of the regulator's senior officials.

The dual-tier system is used mostly in the appointment of high-level officials in Angola as the Angolan Constitution provides for a system of checks and balances, with the President, National Assembly, and judiciary sharing power and responsibility.[160] For example, the appointment of the Governor of the National Bank of Angola, which is governed by the Law on the National Bank of Angola (Lei do Banco Nacional de Angola), outlines the qualifications, appointment process, and responsibilities of the Governor of the National Bank. According to Article 17 of the law, the President of the Republic appoints the Governor, after consultation with the Council of the Republic and with the approval of the National Assembly.[161] Similarly, the appointment of the Chief Justice of the Supreme Court and other judges is done after hearing the opinion of the Higher Council of the Judicial Magistracy and with the prior authorization of the National Assembly.[162]

Veto firewall protection is a concept based on the principle of good governance and is considered a best practice for ensuring the independence of regulatory bodies.[163] To ensure the independence of the climate change regulator in Angola, it is recommended to establish a dual-tier veto firewall protection process, which provides two layers of

[156] *Ibid.*
[157] *Ibid.*
[158] *Ibid.*
[159] *Ibid. See also*, Kikelomo Kila *supra-98.*
[160] Inge Amundsen, 'Good Governance in Angola: Parliamentary Accountability and Control' (2010) (CMI - Chr. Michelsen Institute) <https://www.cmi.no/projects/386-good-governance-in-angola> accessed 16 March 2023.
[161] Article 17, Lei do Banco Nacional de Angola.
[162] Article 176(1) of the Constitution of Angola. See also, Article 163 of the Angolan Constitution.
[163] Kikelomo Kila, *supra-98.*

protection against political interference.[164] The first layer of protection involves the creation of an independent body that will recommend candidates for key positions in the climate change regulator. The members of this body should be experts with relevant experience and knowledge in the field, and their recommendations should be based on merit and expertise rather than political considerations.

The second layer of protection involves making the appointment or removal by the President based on the recommendations of the independent body subject to the approval of the National Assembly. This additional layer of scrutiny and oversight by elected representatives ensures that the recommended candidates are qualified and suitable for the positions and reduces the likelihood of political interference.

Implementing this dual-tier veto firewall protection process will safeguard the climate change regulator in Angola against undue influence and pressure from political actors, ensuring its autonomy and impartiality in fulfilling its mandate to mitigate and adapt to climate change.[165]

An exemplar of a statutory provision instituting the veto firewall protection for the climate change regulator is provided below –

Section 3: Appointment and Removal of Members of the Agency

1. The Chairman and senior officials of the Agency shall be appointed by the President.
2. The appointment shall be based on a recommendation from an independent group of climate change experts to be set up by the Chief Justice.
3. The appointment shall be subject to approval by the Senate.
4. The Chairman and Senior Officials shall have a fixed tenure of 4 years renewable for another 4 years.
5. The Chairman and Senior Officials shall be removed from office by the President based on a recommendation by the Independent Group of Experts for proven cases of misconduct or incapacity of the mind or body subject to the approval of the Senate.

9.6 Mapping Regulatory Reforms for Climate Change Mitigation in Angola

Based on the foregoing, there are specific requirements that must be fulfilled for a comprehensive reform of Angola's climate change regulatory framework through the dilute interventionism model. Table 1 below encapsulates the relevant issues that must be addressed in the reformation of the climate change regulatory framework, the steps required to achieve the objective and what each step entails. By incorporating these action points, Angola can redesign its climate change regulatory framework for optimal actualisation of its climate change goals.

[164] *Ibid.*
[165] *Ibid.*

Table 1: Roadmap for Reforming Angola's Climate Change Regulatory Framework

Issue	*Action Point*
Absence of Framework Climate Change Legislation	Enact a Climate Change Act
Absence of Climate Change Regulator	Establish the National Climate Change Agency (NCAA) as the sole independent climate change regulator.
Corporate apathy to mitigation projects	Impose climate change obligations on corporations in the Climate Change Act with the regulator given enforcement powers
Securing the independence of the regulator through a Veto Firewall	Institute a Dual-Tier veto firewall system in the Climate Change Act. 1st Tier – recommendation by an independent group of experts 2nd Tier – Approval by Senate
Incentivising Corporate participation in mitigation projects through regulatory tools	Institute prescriptive and facilitative measures in the Climate Change Act. Prescriptive Measures (fines, loss of license etc.) Facilitative Measures (Tax incentives, self-regulation etc)

10. DILUTE INTERVENTIONISM AND SUBSIDIARY LEGISLATION BY THE CLIMATE CHANGE REGULATOR

For the dilute interventionism model to be effectively implemented, it is crucial to have a regulatory framework that covers all aspects of climate change, including mitigation and adaptation. This framework must empower an autonomous regulator to implement the model by enforcing obligations and responsibilities on corporations, government bodies, and individuals concerning climate change mitigation and adaptation.[166]

Furthermore, the regulatory framework must provide for subsidiary legislation by the regulator. This involves the development of rules, guidelines, and procedures by the regulator to provide additional details and clarity on how to comply with the regulations. To ensure transparency and accountability in the regulatory process, this paper recommends that the subsidiary legislation should be published and made accessible to the public. To ensure that the regulatory framework is effective, it must be designed in a way that can withstand opposition from corporations that may resist regulatory oversight.[167] This requires that the regulatory

[166] *Ibid.*
[167] *Ibid.*

framework demonstrates the state's authority over corporations.[168] Strict prescriptive measures should be included in the legal instruments to deter non-compliance with the regulations. These measures may include severe penalties such as the revocation of operating licenses, the closure of operating facilities, and criminal or civil sanctions against corporations and their senior officers.[169]

The regulatory framework should, therefore, be flexible enough to allow the regulator to create subsidiary legislation that complements the general provisions in the framework legislation. This ensures that the regulatory framework is adaptable to changing circumstances and can address specific issues that may arise.[170]

The power of the regulator to promulgate subsidiary legislation provides it with the power to develop and implement specific regulatory measures to enforce compliance with the Climate Change Act. This may include the establishment of standards, procedures, and rules that set out the required intervention measures to be implemented by corporations. These measures may also prescribe specific consequences for non-compliance, such as revocation of licenses, closure of operating facilities, and the imposition of civil or criminal sanctions against corporations and their senior officers.

Furthermore, to ensure that the regulatory framework is effectively implemented, it is essential to streamline the regulation of multiple sectors that contribute to carbon emissions under a single comprehensive framework.[171] This approach will provide clarity to corporations regarding their obligations, the regulatory body responsible for enforcing compliance, and timelines for meeting regulatory standards.[172] To achieve this, regulatory bodies responsible for various sectors contributing to carbon emissions, such as the oil and gas, manufacturing, and electricity and power sectors, should be stripped of their powers over carbon emissions regulations. These powers should instead be centralized under a single independent regulator responsible for climate change mitigation and adaptation.[173]

This consolidation will allow the regulator to concentrate on its goals without duplicating regulatory functions between different entities, making the regulatory process more efficient and effective in reducing carbon emissions and promoting sustainable development.[174] By consolidating regulatory powers under a single independent regulator, corporations will benefit from greater clarity and certainty in complying with regulations, while the regulator can focus on enforcing compliance and monitoring progress towards meeting targets set out in the Climate Change Act.

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[168] *Ibid.*
[169] *Ibid.*
[170] *Ibid.*
[171] *Ibid.*
[172] *Ibid.*
[173] *Ibid.*
[174] *Ibid.*

11. DESIGNING A DILUTE INTERVENTIONISM PYRAMID IN ANGOLA

One effective strategy for climate change mitigation and adaptation in Angola is to create a "dilute interventionism pyramid" framework.[175] This approach involves using a severe form of intervention as the first step in the enforcement process without resorting to harsh criminal sanctions that may discourage participation in climate change activities to a milder form of intervention as compliance persons.[176] For example, shutting down facilities that are not compliant with recommended carbon emissions levels can act as a deterrent without resorting to harsh criminal sanctions.

Once corporations comply with climate change regulations, the focus should shift to holding the highest-ranking officials accountable through civil and administrative sanctions.[177] These sanctions can include fines, penalties, or administrative actions such as suspension or revocation of permits or licenses.[178] By enforcing such measures, the regulatory framework can effectively encourage corporations to comply with climate change regulations and uphold their responsibilities to mitigate and adapt to the impacts of climate change. The imposition of these measures can also function as a deterrent to non-compliance and ensure that those in positions of power take responsibility for their corporation's actions. It is crucial to ensure that the regulatory framework can effectively enforce such measures to maintain compliance with climate change regulations and promote sustainable development.

The third step in the regulatory pyramid for climate change mitigation and adaptation in Angola involves allowing corporations to establish self-regulatory or voluntary measures to achieve regulatory objectives.[179] The government provides the overall framework within which these measures operate, ensuring that they align with national climate change goals. As long as corporations comply with these measures, the last step in the pyramid is activated, that is, the government can incentivize their efforts through economic and fiscal incentives.[180] These incentives may include tax breaks, rebates, and subsidies for sustainable projects, which can help promote the adoption of sustainable practices while simultaneously contributing to the overall economic growth of the country.[181] This approach can encourage corporations to fully commit to climate change mitigation and adaptation efforts, ultimately benefiting both the environment and the economy.

[175] Kikelomo Kila, *supra-98*.
[176] *Ibid.*
[177] *Ibid.*
[178] *Ibid.*
[179] *Ibid.*
[180] *Ibid.*
[181] *Ibid.*

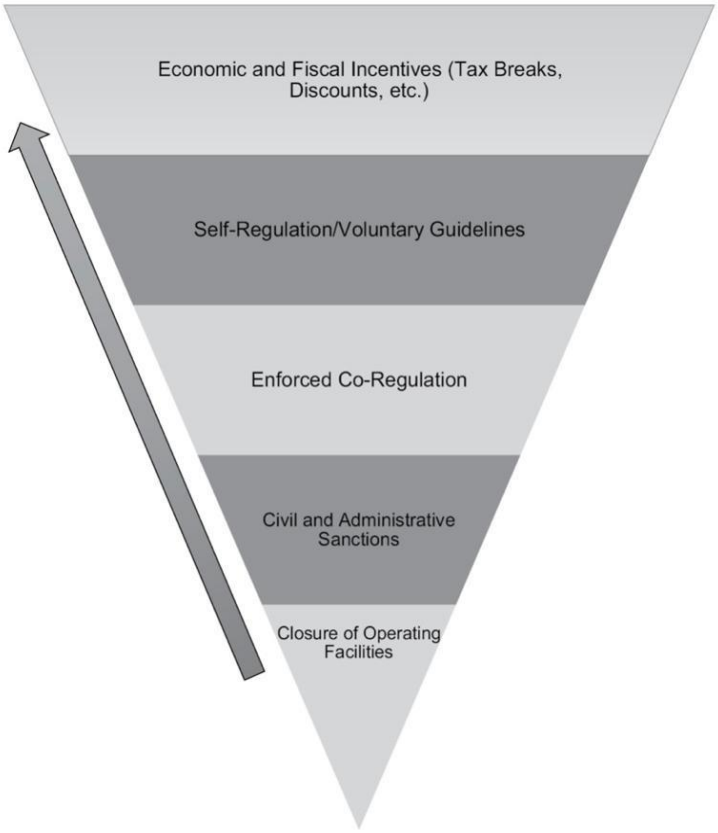

Figure 1: Corporate Regulation for Climate Change Mitigation in Africa (Source: Kila[182])

12. CHALLENGES TO IMPLEMENTING DILUTE INTERVENTIONISM AND VETO FIREWALL PARADIGM IN ANGOLA

The implementation of dilute interventionism and veto firewall paradigms in Angola may face several challenges. Some of them are:

12.1 Lack of Political Will and Commitment

A lack of political will and commitment to enforcing climate change regulations in Angola may lead to the failure to establish the necessary regulatory framework and institutions. Additionally, a lack of awareness and understanding of the importance of climate change mitigation and adaptation may hinder the implementation of the paradigm. This can be addressed through public education and advocacy campaigns, as well as engaging political leaders to emphasize the importance of climate change mitigation and adaptation.

[182] Kikelomo Kila, Corporate Regulation for Climate Change Mitigation in Africa, (1st Edition, Routledge, 2022)

12.2 Lack of Expertise and Technical Knowledge

Lack of expertise and technical knowledge in the field of climate change may limit the capacity of regulatory bodies and institutions to implement and enforce the necessary regulations effectively. The absence of local research and data on climate change and its impacts in Angola may also impede the development of effective regulations and policies. To address this, Angola may need to invest in building local capacity by training and hiring experts in climate change and related fields, as well as investing in local research and data on climate change and its impacts. This will enable the development of effective regulations and policies that are tailored to the local context.

12.3 Corruption and Political Interference

Corruption and political interference may pose a significant challenge to the implementation of the dilute interventionism and veto firewall paradigm. The independence of regulatory bodies and the judiciary may be compromised, leading to a lack of accountability and transparency in the implementation of climate change regulations. This can pose a significant challenge to the implementation of the dilute interventionism and veto firewall paradigm. To address this, the government must prioritize anti-corruption measures and ensure that regulatory bodies are independent and free from political interference.

12.4 Lack of Resources

Finally, the economic impact of climate change regulations may be a significant challenge, particularly for small and medium-sized enterprises that may lack the resources to comply with the regulations. The government may need to provide economic and fiscal incentives to encourage corporations to comply with the regulations and invest in sustainable projects, which may require significant resources and funding. However, providing such incentives may require significant resources and funding, which can be a challenge for the government. Hence, innovative financing mechanisms and partnerships with the private sector and international organizations may be necessary to mobilize the resources required for the implementation of the regulatory framework.

13. CONCLUSION

Angola must prioritize the reformation of its climate change mitigation framework by instituting a comprehensive regulatory framework that incorporates global best practices. The dilute interventionism model and veto firewall paradigm can be effective strategies for reforming the climate change regulatory framework in the country and its implementation can enable Angola to curtail corporate excesses and resistance to participating in mitigation projects. To achieve this, Angola must enact a framework climate change legislation that incorporates prescriptive and facilitative measures, impose climate change

obligations on corporations, establish an independent sole regulator for climate change and institute a veto firewall protection for the regulator.

However, the country faces challenges such as a lack of political will and awareness, resistance from the private sector, limited financial capacity, and bureaucratic obstacles, which must be addressed to ensure the successful implementation of these strategies. To secure a sustainable future for Angola, the government must work in collaboration with relevant stakeholders to create a comprehensive legislative framework that promotes economic growth while ensuring compliance with climate change regulations. This framework should prioritize climate change mitigation and adaptation and encourage the adoption of environmentally friendly practices, including the use of renewable energy, carbon capture and storage, and sustainable land use practices.

Furthermore, the government must prioritize the education and awareness of its citizens on the importance of mitigating climate change and adapting to its impacts. This can be achieved through capacity-building programs, increasing public education, and establishing effective monitoring and enforcement mechanisms. It will require close collaboration with private sector entities and other stakeholders, including civil society organizations, academia, and international partners, to ensure that the framework is tailored to suit Angola's unique circumstances.

By implementing these strategies, Angola can ensure long-term environmental sustainability and minimize the impacts of climate change within its jurisdiction. The government must take prompt action to tackle the urgency of the situation and adopt a comprehensive approach that incorporates best practices from around the world. This will require overcoming the challenges faced and prioritizing both climate change mitigation and adaptation to secure a sustainable future for the country.

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AUTHOR'S DECLARATION AND ESSENTIAL ETHICAL COMPLIANCES

Author's Contributions (in accordance with ICMJE criteria for authorship)
This article is 100% contributed by the sole author. S/he conceived and designed the research or analysis, collected the data, contributed to data analysis & interpretation, wrote the article, performed critical revision of the article/paper, edited the article, and supervised and administered the field work.

Funding
No funding was available for the research conducted for and writing of this paper. Therefore, acknowledging any support agency is not applicable in case of this research or the written work. However, informal support of institutional supervisors, colleagues and respondents is duly acknowledged.

Research involving human bodies or organs or tissues (Helsinki Declaration)
The author(s) solemnly declare(s) that this research has not involved any human subject (body or organs) for experimentation. It was not a clinical research. The contexts of human population/participation were only indirectly covered through literature review. Therefore, an Ethical Clearance (from a Committee or Authority) or ethical obligation of Helsinki Declaration does not apply in cases of this study or written work.

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The author(s) has/have NOT complied with PRISMA standards. It is not relevant in case of this study or written work.

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